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October 18, 1996

VIA COURIER

Mr. William F. Caton, Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, DC 20554

Re: Notice of *Ex Parte* Presentation
FCC Docket Nos. 89-552, 93-252 and 93-253

Dear Mr. Caton:

Transmitted herewith are an original and one copy of a summary of a series of *ex parte* presentations made on October 17, 1996, by Russell H. Fox, Esquire, on behalf of ComTech Communications, Inc., and representatives of the following 220 MHz licensees and interested parties: ComTech Communications, Inc., Kingdon R. Hughes, Jean M. Warren, Metricom, Inc., and Global Cellular Communications, Inc.

The presentations were made to Jackie Chorney, Legal Advisor to Chairman Hundt; Rudolph Baca, Legal Advisor to Commissioner Quello; Suzanne Toller, Legal Advisor to Commissioner Chong; and David Siddall, Legal Advisor to Commissioner Ness. The *ex parte* presentations concerned the parties' positions on channel aggregation issues involved in the FCC's current rule making proceeding in Docket Nos. 89-552, 93-252 and 93-253. Attached is a copy of the "position paper" provided to the Commissioners' advisors, as well as a chart concerning 220 MHz equipment issues that was provided to Chairman Hundt's office.

Should there be any questions concerning this matter, please contact the undersigned.

Sincerely,

Lauren S. Drake

Enclosure

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POSITION PAPER
CHANNEL AGGREGATION IN THE 220-222 MHZ BAND AND THE REQUIREMENT FOR EQUIVALENT EFFICIENT USE

Background - The Third NPRM in the Docket No. 89-552 proceeding proposes permitting channel aggregation, so long as licensees "maintain a spectral efficiency at least equivalent to that obtained through five kHz channelization." Apart from a reference to TDMA, the Commission proposes no standard for determining how spectral efficiency is measured.

- The Commission should not impose such a requirement on licensees of contiguous spectrum because any attempt to define spectral efficiency will be technology limiting.

  Licensees can use more spectrally efficient technologies even in instances where their equipment supports fewer voice paths or a lower data rate per five kHz channel than does five kHz equipment. For example, if a geographic area licensee aggregates 50 kHz of spectrum, it can offer frequency reuse with either voice or data technology. Each transmitter may be capable of providing less than the equivalent of one voice path per five kHz (or a modest data rate). However, the system as a whole will be dramatically more spectrum efficient.

  Imposing a burden on licensees to demonstrate spectral efficiency will place an unnecessary hurdle on the introduction of new services and technologies.

  The imposition of such a burden will also discourage manufacturers from entering the marketplace. The failure to attract additional manufacturers will keep equipment prices artificially high and technology choices artificially limited. The impact on equipment price and availability will affect not only those entities that aggregate spectrum, but those that operate local licenses as well.

- Although the imposition of a spectral efficiency standard will have an impact on equipment cost and availability for all 220 MHz licensees, it will most limit licensees with contiguous spectrum, for whom flexible frequency use will be important. In light of the Commission's plan to allocate additional spectrum that may be used contiguously, a spectral efficiency standard will devalue the spectrum to the licensee and the public.

- **The elimination of a spectral efficiency standard does not eliminate the Commission's commitment to the developers of five kHz technology.**

  At least half of the spectrum, for local licensees, will likely be channelized in a manner than almost ensures the use of 5 kHz bandwidth equipment.

  These licensees will seek to supplement their capacity with newly available spectrum in other parts of the 220 MHz band-further expanding the likely market for 5 kHz bandwidth equipment.

  The 5 kHz bandwidth technology is spectrum neutral. When the FCC originally dedicated the 220-222 MHz band for 5 kHz equipment, no other unused, exclusive, spectrum was available in order to provide an adequate test bed for the equipment. Now, regulations permit a variety of technologies on 800 and 900 MHz system. Moreover, the FCC's refarming proceeding will likely create exclusive spectrum in which the technology can be used.

- **A spectral efficiency standard is unprecedented and inconsistent with FCC policy in spectrum dedicated for commercial purposes.**

  Commercial operators have every incentive to use the most efficient technology available at the most competitive cost. If 5 kHz bandwidth equipment can support the greatest number of customers at the least cost, it will be extensively employed. If it cannot, a Commission requirement that mandates its use is a technological and cost burden that it is not in the public interest for commercial operators to bear.

The Economic Management Consultants International (EMCI) report titled " State of SMR and Digital Mobile Radio, 1996" lists the top four companies according to number of channels and number of unit subscribers. In both catagories, the list is identical. The top four companies are: Motorola, EF Johnson, Ericsson/G.E., and Uniden.

FEATURE/PRICE COMPARISON OF COMPETITIVE RADIOS

BRAND/MODEL	# OF SYSTEMS	# OF MODES	SCAN	PRIVATE CALL	MIL SPEC	COST	LIST PRICE
MOBILES							
Motorola Maxtrac B7/15W	10	10	Y	Y	Y	$468.00	$780.00
EF Johnson 8605/15W	16	10	Y	N	N	$490.80	$818.00
Ericsson/GE PM82SM/15W	36	9	Y	Y	Y	$630.00	$1,050.00
Uniden SMS825TSA/15/W	10	10	Y	N	Y	$260.00	$579.00
Kenwood TK940/15W	32	11	Y	N	Y	$368.72	$699.00
Midland 70-9020/15W	10	10	Y	N	Y	$389.40	$649.00
SEA 504/20W	4	0	Y	N	N	$475.00	$945.00
SEA 520/20W	20	0	Y	N	N	$567.00	$1,095.00
Securicor LMM3115/25W	N/A	N/A	N/A	N/A	N	$599.00	N/A
PORTABLES							
Motorola MTX-800	6	2	Y	N	N	$477.00	$795.00
EF Johnson CL-HL81	14	10	Y	N	N	$599.40	$999.00
Ericsson/GE PC8LGS	16	16	Y	Y	Y	$630.00	$1,050.00
Uniden SPS801TSX	10	10	Y	N	Y	$315.55	$699.00
Kenwood TK 430	16	10	Y	N	Y	$465.52	$882.00
Midland 70-9301	15	0	N	N	Y	$539.40	$899.00
SEA 700	10	10	Y	N	N	$597.00	$995.00
Securicor LMP3215	AVAILABLE IN 1ST QUARTER 1997						